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Y—122—2019

FACULTY OF SCIENCE

B.Sc. (Third Year) (Sixth Semester) (Backlog) EXAMINATION

NOVEMBER/DECEMBER, 2019

(CGPA Pattern)

PHYSICS

Paper XV (Phy-306)

(Solar Energy)

(Saturday, 21-12-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) All questions are compulsory.

(ii) All questions carry equal marks.

1. Attempt any *four* of the following : 8

- (a) What is meant by thermoelectric conversion ?
- (b) State the application of fuel cell.
- (c) What is solar radiation ?
- (d) Draw the neat labelled diagram of photovoltaic (PV) solar cell.
- (e) Write any *two* advantages of wind energy.
- (f) Give any *two* applications of fuel cell.
- (g) State the types of energy reservoirs.

2. Attempt any *two* of the following : 8

- (a) Discuss on magnetic strip reflector.
- (b) Explain in detail Greenhouses.
- (c) Discuss on advantages and disadvantages of fuel cells.

P.T.O.

3. Attempt any *two* of the following : 8
- (a) Discuss on photothermal systems.
 - (b) Describe on the physical principle of the conversion of solar radiation into heat .
 - (c) Discuss on advantages and disadvantages of biogas.
4. Attempt any *one* of the following : 8
- (a) Describe in detail the principle of operations and designing of fuel cell
 - (b) State the various types of solar collectors and discuss in detail the compound parabolic collector.
5. Attempt any *two* of the following : 8
- (a) Write a short note on heating and cooling of buildings.
 - (b) Write short note on fresnel lens collector.
 - (c) Discuss in short on various forms of energy.
 - (d) Describe the various types of electrodes.